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ABSTRACT

This Digest examines U.S. teacher supply and demand, including projections for the next 10 years. For the past 10 years, the supply of public elementary and secondary school teachers has grown. Currently, the number of teachers in the United States is 3.1 million, 2,666,034 of whom teach in public schools. The number is projected to increase by 1.1 percent annually to a total of 3.46 million by 2008. The projected demand for teachers may outpace the projected growth in the supply. Some researchers estimate that districts will have to hire 200,000 teachers annually over the next decade to keep pace with rising student enrollments and teacher retirements. Other researchers note that shortages are limited to particular regions and communities. Urban and poor communities will have the greatest need for teachers. Most teachers are female and white, while 35 percent of their students are minorities. From 1989-1995, enrollment in teacher education institutions increased by 5.5 percent. The largest increases occurred among Asian/Pacific and Hispanic Americans. Most students in teaching schools and colleges were white and female. The distribution of teachers across states and regions is uneven. Some states typically produce more teachers than they need while others need more than they produce. This maldistribution also exists within states, partly due to salary discrepancies. (Contains 8 references.) (SM)

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The Supply and Demand of Elementary and Secondary School Teachers in the United States

Policymakers and educational administrators consider several factors when making decisions about the need for teachers. The number of teachers required in a district depends largely on K-12 enrollment growth patterns, the pace of teacher retirement and attrition, and desired teacher-student ratios. Other factors, such as high immigration rates within the population or policies on reducing class size, also contribute to the demand for new teachers (Yasin, 1998). This digest will give a brief overview of teacher supply and demand in the United States, including projections for the next 10 years.

Profiles of Teachers and Students in the United States

For the past ten years, the supply of public elementary and secondary school teachers has grown. Currently, the number of teachers in the United States is estimated to be 3.1 million, 2,666,034 of whom are teaching in public elementary and secondary schools (Snyder, 1999). Another 400,000 teach in private elementary and secondary schools (NCES, 1997). These estimates indicate an increase of about 17 percent since 1988. For the 1998-99 school year, there were 2,780,074 teachers in public schools. Over a million of those teachers (approximately 40 percent) were in the six states of California, Florida, Illinois, New York, Ohio, and Texas.

The number of elementary and secondary school teachers is projected to increase by 1.1 percent annually to a total of 3.46 million by the year 2008 (Gerald & Hussar, 1998). Elementary school teachers will increase to 2.05 million and secondary school teachers will increase to 1.19 million by 2008 (Gerald & Hussar, 1998). Similarly, elementary and secondary student enrollments are projected to increase to 54.27 million for the same time period. However, other factors such as teacher retirement and increased immigration will continue to increase the number of students, and thus the need for more teachers.

The projected demand for teachers may outpace the projected growth in the supply of teachers. Some researchers and policymakers estimate that school districts will have to hire about 200,000 teachers annually over the next decade to keep pace with rising student enrollments and teacher retirements for a total of 2.2 million additional teachers (Fideler & Haselkorn, 1999). However, some researchers point out that shortages are limited to particular regions and communities and argue that there is not an over-all teacher shortage. Moreover, most of the new teachers are needed in the specific subject areas of bilingual education, special education, mathematics, and physics and chemistry (Darling-Hammond & Berry, et. al., 1999; Bradley, 1999). In addition, the growth in the minority student population points to a need for more teachers of color.

Urban and poor communities will have the greatest need for teachers, with more than 700,000 additional teachers needed in the next decade. Urban communities also face the added challenge of retaining their teachers, who may be attracted to the higher salaries offered in wealthier suburban school districts.

The pupil-teacher ratio at the elementary school level in the United States is well within the range for developed countries. The U.S. pupil-teacher ratio is 17. The pupil-teacher ratios in other developed countries are as low as 11 in Italy and Denmark and as high as 27 in Turkey (Snyder, 1999).

Characteristics of the Teacher Population

The majority of elementary and secondary school teachers are female (74%) and white (87%) (AACTE, 1999). Some recent estimates indicate that the percentage of white teachers in public schools has increased to as high as 90 percent, while African-Americans comprise only 7 percent of public school teachers (Snyder, 1999). The average age among public school teachers is 44, and the average length of experience is 15 years (Snyder, 1999).

The story is different among the student population. Of the 51 million elementary and secondary students enrolled in American schools in 1997, approximately 35 percent were minorities (Snyder, 1998). (See table 1). It is estimated that by as early as the year 2000, 40 percent of elementary and secondary students will be minorities.

NCES (1997) data show that 20 percent of teachers will abandon their profession within the first three years, while 9 percent will leave within the first year of teaching. Others estimate that as many as 50 percent of new teachers leave the teaching profession within their first five years (Darling-Hammond and Sclan, 1996). About 75 percent of students in teacher preparation programs applied for teaching jobs, while 58 percent were employed as teachers by the following year.

Characteristics of Teacher Education Student Population

For the period 1989 to 1995, enrollment in schools, colleges, and departments of education increased by 5.5 percent to 520,555 (AACTE, 1999). The largest increases occurred among Asian/Pacific Americans (97%) and Hispanic Americans (80%). African American enrollment increased during this period by approximately 40 percent (AACTE, 1999). It is important to note that 34 percent of African

Table 1
Total Public Elementary and Secondary School Students by Race/Ethnicity, 1996

Race/Ethnicity	%
White	64.2
Black/African American	16.9
Hispanic	14.0
Asian/Pacific American	3.8
American Indian/Alaskan Native	1.1
Total	100.0

Source: Snyder, T. (Ed.) (1998). *Digest of Education Statistics, 1998*. U.S. Department of Education, National Center for Education Statistics.

American students in schools, colleges, and departments of education are also enrolled in Historically Black Colleges and Universities (HBCUs).

The overwhelming majority of students in teaching schools and colleges were white (80.5%) and female (74.2%). Approximately 9 percent of students enrolled in schools, colleges and departments of education were African American, and approximately 5 percent were Hispanic. (See table 2). Native American/American Indians and Alaskan Natives have the highest proportion of males enrolled in a teacher education program at 29 percent.

As table 3 shows, elementary education accounts for approximately 41 percent of undergraduate student enrollment in schools, colleges, and departments of education. This is followed by enrollment in secondary education, with approximately 27 percent of the student population. Early childhood and special education enrollments account for 9 percent of the student population (AACTE, 1999). It is estimated that two-thirds of the 160,000 students who acquire bachelor's and master's degrees in teaching are hired to teach (Darling-Hammond & Berry, et. al., 1999).

Regional Supply and Demand

The distribution of teachers across states and regions in the United States is uneven. The reason for this uneven distribution is that some states have historically produced more teachers than they need, while others have needed more than they produce. States such as Connecticut, Minnesota, New York, Pennsylvania, and Wisconsin have historically produced more teachers than they employ (Bradley, 1999). Others such as California, Florida, Nevada, and Texas require more teachers than they produce.

The maldistribution of teachers is not just among states; the problem exists within states. For example, of the 21,500 teachers licensed in New York in 1996-97, only 5,900 were employed in the state. Despite the existence of licensed teachers in New York, the state hired 9,000 unlicensed teachers for the same time period (Bradley, 1999). In Wisconsin, of the approximately 4,000 teachers licensed in 1996-97, only 32 percent were hired locally by the 1997-98 school year. One reason for the intra-state maldistribution of teachers is salary discrepancies. Some wealthier and suburban districts pay teachers as much as 20 percent more than other districts within the state (Bradley, 1999) and easily attract the licensed teachers they need. Other districts may not be able to offer attractive teacher salaries. Thus, some school districts have a greater need for teachers than others.

Table 3
Undergraduate Enrollment by Area in Education, 1989, 1991, and 1995

	1989		1991		1995	
	N	%	N	%	N	%
Early Childhood	23,491	7.8	27,648	8.0	28,108	9.0
Elementary	130,704	43.5	151,128	43.9	130,975	41.8
Secondary	95,537	31.5	105,569	30.6	86,325	27.6
Special Ed.	22,871	7.6	28,411	8.2	28,151	9.0
Bilingual	923	--	1,479	0.4	1,513	0.5
Vocational	4,128	1.4	5,727	1.7	3,195	1.0
Other	23,062	7.7	24,497	7.1	34,842	11.0
Total	300,716	100.0	344,459	100.0	313,109	100.0

Source: AACTE, *Survey of Teacher Education Enrollment by Race/Ethnicity, and Gender, Fall 1989, 1991, 1995*

Table 2
Total SCDE Enrollment, by Race/Ethnicity, 1995

	N	%
White (non-Hispanic)	418,824	80.5
Black/African American	46,667	9.0
Hispanic	24,429	4.7
Asian/Pacific American	8,787	1.7
Native American/American Indian	3,593	0.7
Alaskan Native	124	
International or nonresident	5,857	1.1
Other	12,274	2.4
Total	520,555	100.0

Source: AACTE, *Survey of Teacher Education Enrollments by Race/Ethnicity and Gender, Fall 1995*

Conclusion

While the supply of teachers has grown over the past ten years, the projected demand for teachers indicates that the supply must continue to increase over the next decade. The demand for new teachers may vary by district, depending on local population growth, immigration rates, teacher retirements and attrition, and teaching salaries offered.

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